

Serial No. 09/836,081
January 12, 2004
Reply to the Office Action dated October 10, 2003
Page 6 of 14

REMARKS/ARGUMENTS

Claims 1-4, 6, 13-16 and 18 are pending in this application. By this Amendment, Applicant AMENDS the Drawings and claims 1, 2, 13, and 14 and CANCELS claims 5, 7-12, and 17.

Applicant has canceled claims 7-12 because these claims are directed to a non-elected invention. Applicant reserves the right to file a Divisional Application to pursue allowance of canceled claims 7-12.

The Drawings were objected to for failing to designate Figs. 4-6, 8, and 10 as --Prior Art--. It is noted that Figs. 7 and 9 illustrate only that which is old. Applicant has amended Figs. 4-10 to properly be designated as --Prior Art--. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the objection to the Drawings.

The Examiner objected to the Drawings because Figs. 1-3 and 7-10 are allegedly improperly cross-hatched. 37 CFR § 1.84(h)(3) states that "[d]ifferent types of hatching should have different conventional meanings as regards the nature of a material seen in cross section" (emphasis added). MPEP § 608.02 states that "[t]he following [cross-hatching] symbols should be used to indicate various materials where the material is an important feature of the invention" (emphasis added). That is, neither 37 CFR § 1.84(h)(3) nor MPEP § 608.02 requires any specific type of cross-hatching. Further, Applicant respectfully submits that one of ordinary skill in the art would easily understand the cross-hatching used in Figs. 1-3 and 7-10. Accordingly, Applicant respectfully requests reconsideration and withdrawal of this objection to the Drawings.

Claims 1-3 and 13-18 were rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter that was not described in the specification in such a way as to reasonably convey to one skill in the relevant art that the inventors, at the time of the application was filed, had possession of the claimed invention. Applicant has amended claims 1 and 13 to correct the minor informality noted by the Examiner. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-3 and 13-18 under 35 U.S.C. § 112, first paragraph.

Serial No. 09/836,081

January 12, 2004

Reply to the Office Action dated October 10, 2003

Page 7 of 14

Claims 1-3 and 13-18 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. As noted above, Applicant has amended claims 1 and 13 to correct the minor informalities noted by the Examiner. Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-3 and 13-18 under 35 U.S.C. § 112, second paragraph.

Claims 1-4 and 13-16 were rejected under 35 U.S.C. 102(e) as being anticipated by Takubo et al. (US Patent No. 6,329,610). Claims 5, 6, 17, and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takubo et al. (U.S. 6,329,610). As noted above, Applicant has canceled claims 5 and 17. Applicant respectfully traverses the rejections of claims 1-4, 6, 13-16, and 18.

Claim 1 has been amended to recite:

"A laminated ceramic electronic component comprising:
a laminated member including a plurality of stacked ceramic layers having a first ceramic layer and a second ceramic layer which is thinner than said first ceramic layer; and
wiring conductors provided for a certain layer of said ceramic layers and including a via-hole conductor extending through said certain layer and a conductor extending along the principal surface of said certain layer; wherein
via-hole conductors of different ceramic layers have different sectional sizes; and
the aspect ratio expressed by H/D is within the range of approximately 0.1 to approximately 3.0, wherein H and D represent the height and radial length for each of said via-hole conductors, respectively." (emphasis added)

Applicant's claim 1 recites the step of "the aspect ratio expressed by H/D is within the range of approximately 0.1 to approximately 3.0, wherein H and D represent the height and radial length for each of said via-hole conductors, respectively." Applicant's claim 13 recites features which are similar to features recited in Applicant's claim 1, including the above emphasized features. With the improved features of claims 1 and 13, Applicant has been able to provide a ceramic laminated member that eliminates the

Serial No. 09/836,081
January 12, 2004
Reply to the Office Action dated October 10, 2003
Page 8 of 14

problem of insufficient filling of via-holes with conductive paste (see, for example, the second full paragraph on page 11 of the originally filed Specification).

Applicant has amended claims 1 and 13 to recite the feature of "the aspect ratio expressed by H/D is within the range of approximately 0.1 to approximately 3.0, wherein H and D represent the height and radial length for each of said via-hole conductors, respectively" which is similar to features recited in Applicant's claims 5 and 17.

The Examiner has admitted that this feature is not taught by Takubo et al. where the Examiner stated that Takubo et al. "fails to explicitly teach that the aspect ratio expressed by H/D is within the range of approximately 0.1 to approximately 3.0, wherein H and D represent the height and radial length of said via-hole conductor, respectively" in the rejection of claims 5 and 17 under 35 U.S.C. § 103(a) as being obvious over Takubo et al.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1 and 13 under 35 U.S.C. § 102(e) as being anticipated by Takubo et al.

First, in anticipation of the Examiner changing the rejection of claims 1 and 13 to an obviousness-type rejection, the Examiner has alleged in paragraph no. 12 on page 6 of the outstanding Office Action that Takubo et al. suggests in **Fig. 3** an aspect ratio of greater than 1. Applicant respectfully disagrees because the aspect ratio cannot be accurately determined from the figures of Takubo et al. For example, the Examiner's attention is directed to the discussion of **Fig. 10** in column 2 of Takubo et al. Lines 41 and 42 of column 2 of Takubo et al. discloses that the diameter of via-hole **904** is 80 μm , and lines 50-52 of column 2 of Takubo et al. states that the thickness of resin layer **902** is 30-50 μm . However, the ratio of these two distances appears to be approximately 1 in **Fig. 10** of Takubo et al. Thus, contrary to the Examiner's allegation, Takubo et al. fails to teach or suggest the feature of "the aspect ratio expressed by H/D is within the range of approximately 0.1 to approximately 3.0, wherein H and D represent the height and radial length for each of said via-hole conductors, respectively"

Serial No. 09/836,081

January 12, 2004

Reply to the Office Action dated October 10, 2003

Page 9 of 14

as recited in Applicant's claims 1 and 13.

Second, the Examiner has alleged in paragraph no. 12 on page 6 of the outstanding Office Action that "[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to make the aspect ratio to be in a specific range between approximately 0.1 to approximately 3.0, in order to be able to vary the dimensions of the via-holes, and therefore the dimensions of the whole device." The Examiner has completely failed to explain why it is necessary to change the aspect ratio of the via-holes in order to change the dimensions of the device of Takubo et al.

The Examiner is reminded that prior art rejections must be based on evidence. Graham v. John Deere Co., 383 U.S. 117 (1966). The Examiner is hereby requested to cite a reference in support of his position that it was well known at the time of Applicant's invention that it is necessary to change the aspect ratio of the via-holes in order to change the dimensions of the device of Takubo et al. If the rejection is based on facts within the personal knowledge of the Examiner, the data should be supported as specifically as possible and the rejection must be supported by an affidavit from the Examiner, which would be subject to contradiction or explanation by affidavit of Applicant or other persons. See 37 C.F.R. § 1.104(d)(2). Thus, the Examiner has failed to provide proper motivation for modifying the device of Takubo et al.

Third, the Examiner has alleged in paragraph no. 12 on page 6 of the outstanding Office Action that "it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233." However, the Examiner is reminded that "[a] particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation." *In re Antonie*, 195 USPQ 6 (CCPA 1977) and MPEP §2144.05(II)(B). Thus, Applicant respectfully requests that the Examiner provide a reference which teaches that the aspect ratio of via holes was an art recognized result-effective variable

Serial No. 09/836,081
January 12, 2004
Reply to the Office Action dated October 10, 2003
Page 10 of 14

at the time of Applicant's claimed invention.

Thus, Applicant respectfully submits that Takubo et al. fails to teach or suggest the feature of "the aspect ratio expressed by H/D is within the range of approximately 0.1 to approximately 3.0, wherein H and D represent the height and radial length for each of said via-hole conductors, respectively" as recited in Applicant's claims 1 and 13.

Accordingly, Applicant respectfully submits that none of the prior art of record, applied alone or in combination, teaches or suggests the unique combination and arrangement of elements recited in claims 1 and 13 of the present application. Claims 2-4 and 6 depend upon claim 1 and are therefore allowable for at least the reasons that claim 1 is allowable. Claims 14-16 and 18 depend upon claim 13 and are therefore allowable for at least the reasons that claim 13 is allowable.

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

Serial No. 09/836,081
January 12, 2004
Reply to the Office Action dated October 10, 2003
Page 11 of 14

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

Date: January 12, 2004


Attorneys for Applicants

Joseph R. Keating
Registration No. 37,368

Christopher A. Bennett
Registration No. 46,710

KEATING & BENNETT LLP
10400 Eaton Place, Suite 312
Fairfax, VA 22030
Telephone: (703) 385-5200
Facsimile: (703) 385-5080